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Peach Culture in Texas

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INITIAL STEPS

Selection of Site.

The orchard has too often been set out on the poorest land on the farm, the better land being saved for cotton and corn. Fruit trees in the home or commercial orchard can be made more profitable than any of the field crops, if given the proper location and care.

Orchard land should be properly drained, for fruit trees cannot stand wet feet. Not only must water drainage be considered but air drainage as well. A high or rolling plot of land is better than a level one. Under no circumstances should a low place that may prove to be a frost pocket be selected. Cold air goes down, seeking the lowest level possible as it drains off of the sloping hillsides. The exposure makes little difference in this state, but, everything else being equal, a northern slope is preferable to a southern, as the buds will swell later in the spring with less danger of injury by late frosts.

Soil.

Peach trees do best on a deep sandy loam, but will succeed on practically any fairly fertile, well-drained land. A soil with somewhat porous subsoil is much better than stiff clay. It is a good plan to precede the orchard with a cultivated crop; and a root crop is preferable, as it will loosen the soil deeper than any other. The land should be broken deeply in the fall; and, if the planting is not to be done until spring, the soil can be advantageously left rough during the winter. This will allow the action of the frost and will enable the rough land to absorb and hold the winter rains and snows. Before planting, however, the soil should be worked down into good condition as though a garden crop were to be planted. It pays to get the land into the very best condition possible before the trees are planted.

Varieties.

The Elberta is the outstanding commercial variety. There are a few other varieties that are grown in a limited way by commercial growers. Among others found in the different localities are: The Early Wheeler, Mayme Ross, Victor, Carmen, Slappy, Hiley-Belle, J. H. Hale, Arp Beauty, Augbert, Mixon Cling, and Chinese Cling.

The question of varieties for home orchards depends largely on the personal preference of the individual grower. It is not advisable to plant a large acreage of new varieties until they have been thoroughly tested under local conditions. Varieties for the home orchard should be arranged so that there will be fresh fruit for the table from May to October.

Selection of Stock.

As a general rule it is advisable to buy home-grown stock. The home nurseryman is acquainted with local conditions and can give valuable suggestions as to the adaptability of different varieties. If anything

prove unsatisfactory, he is near at hand to make adjustments. Nurserymen who are financially and morally responsible should be patronized. There are some tree agents that represent reliable nurseries; but many itinerant fruit-tree pedlers simply "bootleg" inferior stock. A poor tree is a bad investment and a liability no matter how low the cost. A clean, vigorous tree is an asset and worth extra cost.

Select one-year-old trees, well matured, and three to five feet in height. The height of a tree should not be given as much attention as the diameter. A good stocky tree, with well developed lateral root system is best.

Examination of Stock.

Before planting, the trees should be examined carefully to see that they are free from nematodes; insects, such as wooly aphis and San Jose scale; and diseases, such as crown gall. Crown gall is a warty growth that is found on the crown and roots of trees and for which there is no remedy. Prevention is the only safe plan. See that the stock planted is free from this disease. (For insects and diseases, see Ex. C. 29b)

Orders for nursery stock should be placed early. Nurseries fill orders as they are received. Those who buy early get a better selection and have the trees on hand and ready to plant when the ground is in condition. June budded stock is preferable for commercial plantings.

Care of Stock.

When trees are received from the nursery, they should be unpacked and "heeled in" in a trench with the dirt worked well around the roots to prevent drying out. If they are to stay "heeled in" for any length of time, a good deal of water should be used in the trench. Trees are usually "heeled in" at a 45-degree angle from the ground with the tops toward the south.

PLANTING

Better results are usually obtained from fall planting, but good results can be obtained from planting early in the spring.

The proper distance to plant in most sections is 25 by 25 feet. Peaches may, however, be planted as close as 20 by 20 feet in rich soil where there is an abundance of moisture. Where moisture is limited, a wider spacing of from 30 to 35 feet is practical. The method of planting in squares is usually more satisfactory than the hexagonal or some other arrangement.

The land should be laid off in straight rows and a stake placed where each tree is to stand. The holes should be dug as the trees are planted so that the soil will not dry out. After the hole is dug, the tree may be "sighted in" by the row of stakes. Every effort should be made to have the rows straight, as the orchard will make a better appearance and be more easily worked. The holes should be dug about two feet deep and three feet in diameter, and partially filled with rich topsoil before the tree is set. On fertile, sandy loam, it is only necessary to dig holes large enough to receive the roots in their natural shape. Where the subsoil is tough and near the top, dynamiting is often resorted to with excellent results. Young trees should not be planted in holes filled with fresh barnyard manure.

The roots should be pruned back to eight or twelve inches in length, cutting back to sound wood any that are broken or diseased. If any trees are found infested with crown gall, or nematodes, they should be rejected and burned. Use only topsoil in filling, as it is much more fertile than subsoil taken from the bottom of the hole. After the dirt has been thoroughly worked under the crown of the tree with the fingers, a bucket or two of water poured into the hole will help pack the soil and fill up injurious air spaces. Then, fill the hole with more soil and pack firmly with the feet. After transplanting, the tree should stand an inch or two deeper in the soil than when in the nursery row. The last few shovels full of soil put around the tree may be left loose so that it will not pack and dry out.

PRUNING

General Points.

The best type of peach tree for Texas conditions is one that is low and fairly open. Quality fruit is produced only where it can get sunlight. The modified "inverted umbrella" shaped tree will give maximum results, as this allows the fruit to grow on both sides of the limbs and down toward the framework of the tree.

The objects of pruning are:

1. To establish a balance between the roots and the top of the newly planted tree.
2. To form a low, open top.
3. To force the growth of new wood, as the fruit of the peach is produced on one-year-old wood only.

Hand shears, a pair of shears, with 24 or 36-inch handle, for lopping off large branches, and a pruning-saw are needed. A small swivel-saw for cutting the smaller limbs, and a good hand-saw for the larger limbs are better than a medium-sized pruning-saw to be used for all purposes. It is poor economy to purchase cheap, light tools; and it is important that they be kept clean and sharp at all times. Cuts made with sharp tools heal quickly; jagged and torn cuts heal slowly and invite disease and insect injury. Sharp tools also save much time and labor.

Cuts.

All pruning cuts should be made just above a limb or bud. A stub should never be left, as it will die down to the next limb or branch and continue on down to the trunk and roots of the tree. Branches, cut off close with a cut parallel to the portion left, will not be a source of infection for wood-rotting fungi. A long, narrow wound will readily heal over; a stub will never heal.

Shaping the Tree.

If it is desired to spread the tree, cut to an outside bud or branch. If the branches are inclined to be straggling and willowy and a more compact, upright tree is wanted, cut always to an inside bud or branch. The bud or branches left, then, become the terminal shoots and determine to a great extent the growing habit of the tree.

Newly planted trees are usually headed back as soon as set. Other trees may be pruned at any time when they are dormant. Very little spring or summer pruning is needed if the proper treatment is given during the winter.

Wound Coverings.

Paint the cut surfaces with pure white lead and linseed oil. This mixture should be a little thicker than good house paint. All cuts or exposed places, over an inch in diameter, should be painted with this wound covering. Never use creosote or tar products as wound dressings. Injury to the cambium layer often results.

First-year Pruning.

As the young tree comes from the nursery, it has lost part of its root system, due to injury in digging, shipping and handling. The top must be cut back to balance the loss in root system. If it is only a "whip"—as are most one-year-old trees and June buds—it should be cut off about 18 or 20 inches from the ground. Knee-high is a convenient measure.

The only other pruning necessary the first season will be to keep the buds rubbed off the lower six inches of the trunk, letting all the others grow to protect the trunk from sunscald and to provide branches from which the permanent framework will be selected the next season.

Second-year Pruning.

All but three to five of the best limbs, well arranged around the trunk, should be removed, and those left to form the main framework of the tree cut back to six or eight inches in length. When selecting branches for the main framework, choose limbs that are well distributed around the trunk from the top to within a few inches of the ground. If all come out at the top of the trunk or directly opposite each other, weak crotches will result. With the exception of keeping all other buds rubbed off the trunk, this is all the pruning that will be required the second year.

Pruning after the Second Year.

The limbs for the permanent framework will throw out numerous side branches. From two to four of these should be selected on each of the main limbs and the others removed. Cut these back to from 16 to 24 inches in length, removing from a third to a half of this growth. If surplus limbs have been thrown out from the trunk, these should be removed. The following year, the tree will not require such severe pruning, but the branches should be thinned out and cut back, forming a well balanced low, moderately open head. Peach trees should have an annual pruning. Usually the branches should be shortened back from a third to a half of the current season's growth. Peach trees bear fruit only on one-year old wood, hence they must be pruned more heavily than most trees after they come into bearing. By judicious pruning, much of the labor of thinning can be avoided.

The gradual renewal system should be used. This means that approximately a fourth of the wood be removed each year. It has been proved by orchard tests that it is best to have limbs of new wood back to the base rather than to have old limbs cut back just at the tips. With a system that will renew the limbs back to the base there is less damage from physical and disease injury to the tree. Such a system of removal, also, gives a maximum crop of fruit and never requires "dehorning."

Dehorning.

Where trees have been neglected for a period of years and they will not live through another year unless drastic treatment is given, it is sometimes profitable to "dehorn" them as a temporary measure. By "dehorning" is meant cutting off all the limbs to stubs about two feet long. The first year there will be a mass of young sprouts. These must be thinned out and the tree pruned as a young tree. The ends of these stubs should be painted with white lead and linseed oil.

"Dehorning" can be used only in extreme cases and then only to get fruit for a few years. When an orchard has reached the stage where it is advisable to "dehorn," a new orchard should be planted that will be in bearing by the time the "dehorned" trees have become unprofitable.

Thinning.

One of the reasons trees fail to bear regularly is because they are allowed to over-bear. All the food and vitality of the trees are used up in trying to mature too large a crop of fruit. The result is the fruit buds for next year are not well nourished and are easily killed by any unfavorable conditions.

When a tree has set more fruit than it should bear, a portion should be taken off. If it is properly thinned, not only will there be as many bushels of fruit as if all were left, but the peaches will be larger, more highly colored and will sell at a higher price. Peaches should be thinned early in the spring. Be sure to thin before the seeds become hard. It is the formation of seed and not the flesh of the peach (which is nearly all water) that takes the vitality of the tree. Leave the little peaches six to eight inches apart on the limbs, and, of course, leave the most perfect specimens. This is a good opportunity to harvest the culls.

CULTIVATION AND INTERCROPPING

Cultivation.

It is very necessary that the orchard receive thorough cultivation, if the best results are to be obtained. Cultivation should begin in the spring just as soon as the ground is in condition to work. The first cultivation should consist of breaking the soil and turning under cover crops. The soil should be turned toward the trees one year and away from them the next. This should be followed with shallow cultivation throughout the growing season to destroy weeds and keep a dust mulch. The mulch will prevent evaporation of the water in the soil. A spike-tooth or spring tooth disk or acme extension harrow are good implements for this work. In the use of these farm tools, it is necessary to leave a small space close to the trees to be worked by hand. This is better than to run the risk of injuring the trees by bruising them with the implements.

Winter Cover Crops.

In September or early October, a cover crop of oats, rye or barley should be planted. This will protect the soil in winter and furnish green material to be turned under in the spring. This is very essential. Hairy vetch at the rate of about twenty pounds per acre may, also, be sowed with the small grain. Vetch is a legume and will enrich the soil. It can stand considerable cold. However, it often needs an application of lime for best results.

Intercropping.

It is always advisable to plant some good legume, such as cowpeas, between the tree rows in young orchards because these crops have the power of taking nitrogen from the air, and, when they are turned under in late summer, the nitrogen and other plant foods are stored in the soil in an avaliable form. In addition to this, they provide a great deal of humus which makes the soil active and increases the water-holding capacity. A space of at least four feet should be left on each side of the tree, and kept cleanly cultivated.

It is very important that only Brabham or Iron varieties of cowpeas be planted in the orchard, because they are resistant to the serious trouble known as root knot.

It is much better to grow legumes, which build up the soil fertility in young orchards, than to grow other crops, such as potatoes, tomatoes, and cotton. At no time should other than low growing crops that require intensive cultivation be grown in orchards.

After the trees have come into full bearing, no crops should be grown between the rows and clean cultivation should then be practiced. By this time, the tree roots have practically covered the ground between the rows and the trees need all of the moisture which would otherwise be taken up by crops or weeds. Furthermore, by keeping the trees in good growing condition throughout the summer, strong fruit buds will be formed for the next season. Also, by making the trees go into a dormant condition late, they will not bud so early in the spring and there is less danger of the buds' being killed by late frosts.

FERTILIZERS

The kind and amount of fertilizers to use on peach trees depend largely upon the nature of the soil and the age of the trees. For young trees, on loam soils with clay or sandy subsoils, such as Orangeburg, Susquehanna or Norfolk types, a 10-4-0 or 10-4-2 formula may be used; bearing in mind that on these types phosphoric acid and nitrogen are mostly needed until trees come into bearing. After the trees begin to bear, the addition of potash to the formulas helps to improve the quality of the fruit, particularly the shipping quality. For this purpose, 8-4-4 or 7-5-5 make very good formulas. On deep, sandy soil, such as Norfolk sand, a 12-4-4 formula may be used until the trees come into bearing, then, the 8-4-4 or 7-5-5 formulas.

Home Mixtures.

The following are good formulas for home mixtures for young trees:

1. 200 pounds acid phosphate and 100 pounds nitrate of soda.
2. 200 pounds acid phosphate and 75 pounds sulphate of ammonia.
3. 200 pounds acid phosphate and 200 pounds cottonseed meal.
4. 200 pounds acid phosphate, 100 pounds cottonseed meal and 50 pounds of nitrate of soda or sulphate of ammonia.

For bearing trees, add 30 pounds of muriate or sulphate of potash to each mixture.

Time and Method of Application.

The mixed fertilizers should be applied just about the time growth begins in the spring. As a rule, one pound per tree should be applied the first year; two pounds, the second; three pounds, the third; and every year thereafter, from four to five pounds per tree.

A side application of nitrate of soda or sulphate of ammonia at the rate of a fourth to a half pound per tree for young trees and one to two pounds for bearing trees may, also, be made from May 15 to June 1, the amount depending upon the growth the trees are making. Bearing peach trees should make an average growth of 12 to 24 inches annually.

For young trees, the fertilizer should be applied in a small circle around the tree. This circle should then be increased every year until the trees are five or six years old, after which it may be broadcast between the rows.